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ABSTRACT

A study involving 1,337 students in Arizona was conducted to compare the classification of learning disabilities across several school districts, utilizing the then-proposed Bureau of Education for the Handicapped (BEH) formula. Three types of problems were apparent: the basic concept of learning disability varied across districts; the areas of behavior considered to be significant for computing discrepancy were applied inconsistently; and testing and sampling problems occurred. Among findings were that if the BEH proposed formula were to be applied to the Arizona sample, approximately 37% would not be classified as learning disabled (LD); and that the percentage of children designated as LD depends heavily on how criteria are manipulated. (SBH)

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PROBLEMS WITH DEFINITION RELATED TO LEARNING DISABILITIES

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(Paper presented May 2, 1978 at the 56th Annual International Convention of the Council for Exceptional Children, Kansas City, Missouri.)

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A year ago, we were deeply embroiled in controversy over the operational definition of learning disabilities for purposes of Federal regulations. Of particular concern was the proposed use of a "severe discrepancy level" formula to qualify students as learning disabled. The formula consisted of the computation of a discrepancy between each child's expected and actual achievement in eight academic areas.

Subsequently, the formula was dropped from the adopted regulations, primarily due to the massive outcry from professionals around the country who pointed to the capriciousness of this index.

As part of the effort to determine the effect of using such a formula, we collected a significant amount of data from school districts in the State of Arizona during January and February, 1977. Our usable sample included 771 students from the Mesa Public Schools and 566 from 22 other districts throughout the state. We would like to review the highlights of our research and indicate implications for the field of learning disabilities today. Please note that all students in the study were legally enrolled in special education classes and had been certified as learning disabled in the State of Arizona. This was according to the best combined professional judgment of the psychologists and other staff in the various schools. The State of Arizona includes an "achievement significantly below expected achievement" clause in its definition.

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In attempting to analyze and interpret our data, we encountered many problems. The types of problems we met are indeed representative of the dilemma that we as a field face in attempting to define L.D. They might be summarized by stating that: Clinical judgment is lost when we apply arbitrary numbers and utilize artificial categories of behavior in our attempts to define learning disabilities.

Essentially three types of problems were apparent when we tried to compare the classification of L.D. across several school districts, utilizing the then-proposed B.Z.H. discrepancy formula:

(1) The basic concept of learning disability varied across districts;

(2) The areas of behavior considered to be significant for computing discrepancy were applied inconsistently;

(3) Testing and sampling problems occurred.

We will consider each of these briefly.

Variations in the Concept of Learning Disabilities:

Some districts required that "a neurological involvement" be identifiable before classification was possible. Other districts specified only low functioning in basic school subjects, such as reading, spelling or arithmetic.

Some school districts accepted perceptual and motor disabilities that were not necessarily reflected in poor academic performance. In essence, an academically adequate student might have been classified as learning disabled on the basis of a severe motor problem.

Some L.D. students had I.Q. scores that also classified them as mentally retarded.

Intelligence test scores were used to classify bilingual-bicultural students. At best, this confounded the classification process; at worst it represents unfair discrimination.

Some districts classified in terms of process, that is, how a student performed, while others classified in terms of product, that is, whether the child could perform, irrespective of how he actually performed. Such a student might have been classified

on the basis of his approach to learning, regardless of his level of achievement.

Thus, we conclude that the total pool of children who were designated as L.D. were classified on a wide range of assumptions as to the basic concept of L.D. This can only be considered a heterogeneous population, drastically reducing the liklihood that a single formula can be applied with any uniformity.

Significant Areas of Behavior for Discrepancy:

When designating a child as L.D. we usually state that his achievement is significantly below expectation. Whenever this is stated, however, we must ask the question: "Achievement in what?"

Although the proposed Federal definition designated eight areas of behavior (oral expression, listening comprehension, written expression, basic reading skills, reading comprehension, math calculations, math reasoning, and spelling), three of these critical areas do not have commonly used tests: oral expression, listening comprehension, and writing expression. This is a particular problem at the junior high and high school levels.

It is estimated that 95% of the data did not include these three categories, thus eliminating a significant number of students with potential problems in these functions. Some definitions include process disabilities. The proposed operational definition did not allow for measurements of such abilities.

Our ability to designate areas of significant discrepancy depend on (a) our concept of L.D. and (b) available measures of such abilities. These latter factors also contribute to the reduced liklihood that a single formula for L.D. is feasible.

Testing and Sampling Problems:

Other types of testing problems occurred.

A great variety of tests were used to classify students: Intelligence, diagnostic, criterion reference, and even group achievement tests. Factors of varying validity and reliability effect the results of any study of this type.

Some tests used to classify did not yield grade scores, thus were eliminated from our data processing. If a district used percentile, age, stanine, or standard scores, they could not be utilized in our analysis. Elimination of these scores probably affected our results to some degree.

In addition to these testing problems, we also experienced sampling difficulties: Most responding school districts submitted only a small portion of their total population of learning disabled students. There is no way of knowing if the samples were representative of the total learning disabled populations in the districts.

These problems make it imperative that we view our results with caution, but there are some usable conclusions and results.

Results:

If the BEH proposed formula were to be applied to the Arizona sample, approximately 63% would continue to be classified as learning disabled students. Thirty-seven percent would not be classified as learning disabled using the proposed formula as the single criterion. The I.Q. used to determine these percentages was either the Full Scale W.I.S.C. score or the single I.Q. score (when some other intelligence test was utilized).

There are several ways in which Wechsler I.Q. scores are used in clinical practice. Each of these usages affects the percentage of children who would qualify as L.D. under the BEH formula:

(1) Instead of using the Full Scale I.Q., the higher I.Q. from either the Verbal or Performance Scale could be utilized;

(2) The Verbal-Performance I.Q. difference could be an index of discrepancy in itself;

(3) Children whose highest I.Q.s are below 85, could be eliminated on the basis of lack of "average potential."

We had a sample of 662 children on whom Wechsler I.Q. scores were available in the Mesa Public Schools. For this group, we recomputed the formula using whichever

I.Q. was higher (Verbal or Performance), rather than the averaged Full Scale I.Q., to indicate level of expectancy. Using these calculations, nearly 73% of the group would qualify as L.D. This represents a 10% increase over use of the Full Scale I.Q. as the index.

Use of a Verbal-Performance difference of 12 points or greater as an index of discrepancy, increased our qualifying percentages to over 80%.

When students with I.Q.s below 85 were eliminated from consideration, the agreement rate increased to nearly 82%.

For our sample of 661 students from the Mesa Public Schools, W.I.S.C. scores were available to establish expectancy levels and Peabody Individual Achievement Tests were available for assessment of achievement. In addition, the following conditions were applied:

(a) Children with lowered mental ability were disqualified;

(b) The higher I.Q. (Verbal or Performance) was the gauge for expectancy;

(c) Verbal-Performance I.Q. differences of 12 or more points were considered as evidence of significant discrepancy.

Under those conditions, approximately 82% of the district-certified L.D. students also qualified as such when the proposed BEH formula was calculated.

The most apparent conclusion is rather obvious. Which children are to be designated as L.D. depends heavily on how you manipulate your criteria. In general, 63% of our sample qualified, but various manipulations of data increased that by 20%. Each district must seriously review which criteria it uses in designating L.D. After applying various formulae and criteria, the district could review their own children to check the validity of various aspects of the index. In the end it will be necessary that judicious review of criteria, together with good clinical judgment and, lots of common sense, will continue to be necessary for some time to come. Well informed professional judgment, aimed at the best interests of the child is still better than any formulae we have yet devised.